



Educating Future Leaders in Strategic and Operational Art

By JAMES C. HYDE and MICHAEL W. EVERETT

The joint land, aerospace, and sea simulation (JLASS) is the preeminent joint educational exercise structured to support wargaming at the senior colleges. It generally concludes advanced studies electives on strategic and operational art. The exercise is unique in that both red and blue teams win. This can only be accomplished through cooperation among faculty and staff members.

JLASS is also the only exercise that explores service capabilities in a learning environment, which not only allows but actually encourages risk-taking. Students thus think in a nonthreatening situation, learn to ask the right questions, explore military options in support of political objectives, and experiment by employing innovative teaching tools at a pivotal time in their careers.

Warriors who fought in the Persian Gulf, regardless of component, attributed much of their

success to training at Red Flag, Blue Flag, Twenty-nine Palms, and the National Training Center. But such training is costly because it requires deployment of a large number of personnel as well as considerable material over great distances. It also consumes sustainment and maintenance stocks.

Congress is heeding the popular call to focus on domestic issues and balance the budget. Cuts have been made across the board, leaving much of the government to provide the same output with reduced resources. This has required the services to make hard decisions on weapon systems and readiness that are felt by unified commands: CINCs must train with fewer resources each day. It therefore becomes more vital for senior colleges to find ways to educate officers in strategic and operational art and science. Part of this need can be met through wargaming.

Wargaming

In the Summer 1994 issue of *JFQ*, Peter Perla characterized wargaming as "focused on the dynamics and on the interplay of human decisions and possible outcomes of those decisions.... By

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games train, analyze possible outcomes and military capabilities, and educate

nature wargames seek to explore messy, unquantified questions that the physical sciences and operations analysis must ignore." Although there are many kinds of games—ranging from visual two-dimensional simulations of a theater battlefield of today to three-dimensional virtual battlefield simulations of tomorrow—all have three roles: to train, to analyze possible outcomes and military capabilities against those varied outcomes, and to educate.

Educational games have been used traditionally at intermediate and senior level professional military education (PME) institutions: that is, at staff and war colleges. Unlike training wargames, they expose students to issues that they will likely confront as senior leaders. A game may have either a service or a joint flavor depending on its institutional sponsor.

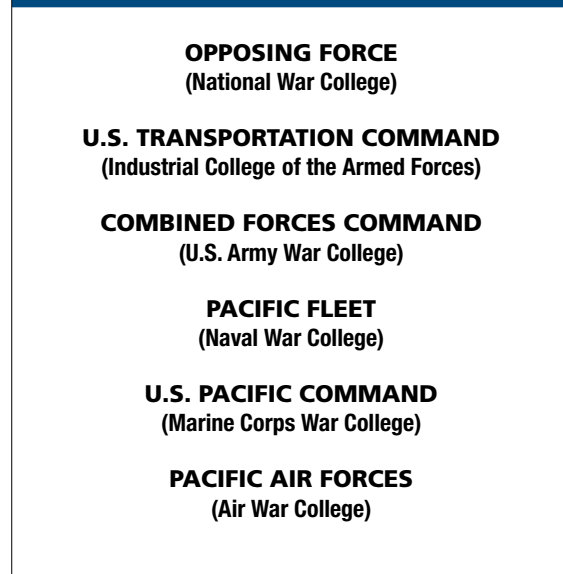
The senior colleges provide player cells (see figure 1) for JLASS which is held each spring at Maxwell Air Force Base, Alabama. A 1993 agreement among the colleges outlined the threefold purpose of this exercise: to develop future strategic leaders, enhance PME by examining potential U.S. military responses to regional crises, and advance development and application of supporting technical tools and methodologies. This rationale is complemented by four exercise objectives:

- educate through an active learning process addressing issues at the strategic and operational levels
- promote jointness, recognition of coalition issues, and enhancement of resident instructional programs
- improve strategic and operational level simulations, wargames, and exercises
- expand logistics and sustainment play to illustrate strategic and operational impacts.

Various scenarios have been gamed thus far. JLASS has had an Asia/Pacific focus in the last few years and the first scenario with two major regional conflicts (MRCs) was used in 1996. It also included three limited regional conflicts (LRCs). One MRC was situated in Southwest Asia and was scripted off-line prior to the arrival of students. Players received intelligence updates on a Southwest Asian MRC while planning for a possible second conflict in the Pacific. The purpose of the first MRC was to compound the difficulties of executing a near-simultaneous second MRC.

Another purpose for a robust scenario was to enable blue team players to grasp the impact of an ongoing MRC on a second one in terms of mobility and equipment availability—from special assets which both CINCs would require to Reserve forces already fighting in another region—as well as the political problems which a second MRC would cause at home and in theater. The

Figure 1: JLASS Player Cells

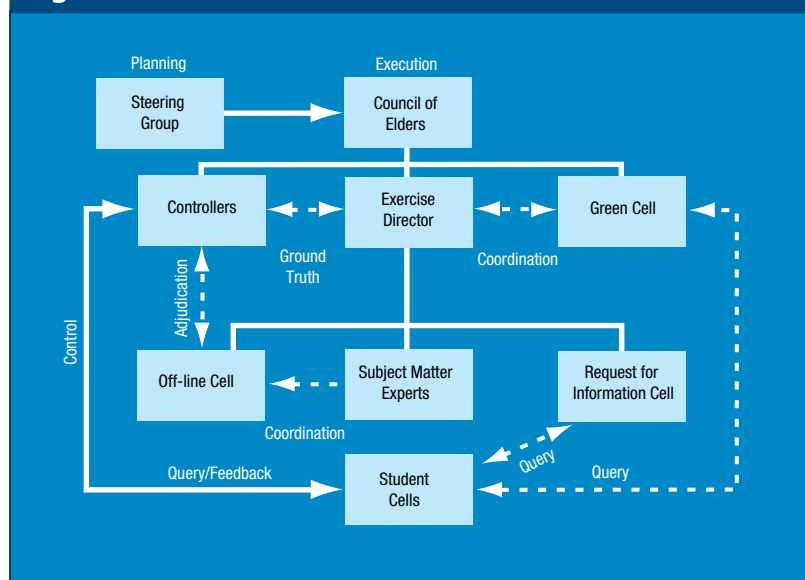


LRC scenarios occurred in the South China Sea. They were designed to place continued pressure on the blue force once a Southwest Asia MRC had subsided. They also provided the red team with options with which to confound the politics of the Pacific region.

Structure

Within the JLASS structure the heads of the senior PME institutions serve as the executive authority and the exercise sponsors. By agreement, committees both plan and execute the program while a JLASS steering group plans the exercise. A new planning cycle begins with the end of an exercise. Each college provides at least one faculty member and one wargamer who select tasks to address from the universal joint task list. Tasks for 1996 include: deployment and redeployment, employment, force sustainment, intelligence, direction and integration, mobilization, theater force requirements and readiness, alliances and regional relationships, maneuver and firepower, and command and control (C²). A game design document is published to determine the nature of play. In addition, the steering committee schedules game dates and planning conferences.

A council of elders (COE), comprised of representatives of the colleges, directs the game to ensure that student learning objectives are met. Given the number of objectives for each college, the council has performed with aplomb. Within the five days of the exercise it managed a ple-

Figure 2: JCLASS Structure

thora of learning objectives and accomplished the following:

- employed concepts of strategic and operational art
- understood crisis action planning and execution process
- translated political objectives into military objectives
 - understood strategic leadership environment
 - developed theater strategies
 - developed and executed joint multinational intercollegiate campaign plans—conducted defensive and offensive operations (counterattack), and developed and executed logistical plans
 - understood strategic aspects of mobilization
 - understood strategic deployment
 - examined Reserve component employment options
 - examined and executed force projection options
 - engaged in media relations
 - organized C² joint forces
 - understood strategic intelligence
 - developed options for weapons of mass destruction (WMD)—identified and suggested appropriate theater response, assessed impact of WMD attack on executing campaign plan, and developed campaign plan contingencies
 - analyzed theater options in second MRC in two near-simultaneous MRC environment
 - allocated forces and resources in multi-crisis theater
 - examined and suggested regional strategies—battlespace dominance, power projection
 - understood employment of JFACC in theater campaign planning
 - understood ballistic missile defense planning
 - recognized difficulties in coordinating basing rights

- understood the impact of special operations
- planned for and integrated information warfare (IW)
- assessed impact of maritime exclusionary zone
- developed noncombatant evacuation operation plan in MRC theater
- planned for war termination and post-conflict activities—force regeneration, rearm, refit.

COE helps the exercise director in resolving problems that arise from student moves and resultant adjudications. The director, who works for COE, is responsible for game control and also keeps adjudication moving smoothly to ensure that the daily input from student moves results in realistic outcomes that facilitate ensuing learning objectives.

Under the exercise director and COE (JCLASS Structure, figure 2) are the controllers, green (other nations) cell, off-line adjudication cell, subject matter experts, and request for information (RFI) cell. Normally there are one or two controllers (professional wargaming staff members) for each player cell who articulate player moves to the director and COE. The off-line adjudication cell coordinates with subject matter experts on special operations forces (SOF), logistics, intelligence, WMD, service specific capabilities, and computer-simulation modeling. Combined, the cells help controllers immeasurably during adjudication.

The Media

Students learn to deal with the media during planning phases. Media attention intensifies as students arrive at Maxwell. CINCs and political advisers immediately undergo a media “murder-board” to ascertain their perspectives on the conflict. Red and blue team members also may make subsequent statements throughout the exercise. Each day the exercise begins with a Global News Network (GNN) telecast providing an overview of the simulated world. Great care is taken to weave a credible story through a series of fabricated press releases from both sides. Day-to-day decisions of a political nature may not directly affect the battle area but have a significant impact on the overall simulation. In JCLASS '96 interviews, for example, prominent businessmen complained about the effect of fighting on sales to their regional trading partners who were not involved in the conflict. A congressional representative reported that her constituency wanted a quick peace since the reduced flow of raw material and subassemblies from the Pacific rim was costing jobs. Several other “short bites” contributed to virtual realism.

Game Play

After the morning GNN update, each team receives an intelligence and operations briefing to set the stage for the day's learning objectives. Then students pursue development of branches and sequels based on the situation. Later in the day, players brief controllers on their next move and long-term vision of how the conflict will develop. After that students attend seminars which complement the exercise. For the faculty and controllers the day has just begun.

Controllers discuss the next move for each player cell with COE and the director. Then, in a closed session, COE and the director determine the length of moves through a combination of player decisions and in conjunction with learning objectives. COE recalls controllers to provide the "new ground truth regional picture." This includes the new current date, the timeline since the last move, and major constraints placed on the game. Shortly thereafter the off-line cell and controllers adjourn for the nitty-gritty assessment (placing data within the framework constructed by COE).

The assessment process adds realism to keep players involved. This part of the simulation is critical if students are to believe that they are in a real struggle for survival. The process usually begins with an overview of the

timeline and theater-wide player moves such as warships assuming defensive positions, movement of air assets, or information/command and control warfare (C²W). Special operations missions include

disruption, destruction, or gathering intelligence on units and logistics sites. Several computer models support adjudication and are particularly helpful in areas such as air defense, deployment, WMD, SOF, and IW/C²W (see listing in figure 3).

The off-line cell melds the results from models plus information from the controllers with logistics constraints and air base and port capabilities to create events that lead to "ground truth" on the next day. Not all information is computer-supplied. Much of it comes from controllers who may want to stress a point, challenge students, or review an issue from the classroom. In either case, the timeline is massaged and woven into a plausible story to present a dilemma to both sides. In the evening after the adjudication teams finish, the controller group (that is, the exercise director, controllers, RFI, media, and off-line cells) reviews the assessment. Controllers express opinions on whether the results make sense. If stories follow

Figure 3: JLASS Supporting Models

**Joint Integrated Contingency Model
(JICM)**

**Extended Air Defense Simulation
(EADSIM)**

**Fallout Assessment System
(FAS)**

**Automated NBC Informational System II
(ANBACIS)**

**Strategic Unconventional Warfare Model
(SUWAM)**

**Crisis Action Model
(CAM)**

council guidance, intelligence and operations updates are worked while media personnel turn the highlights into the next day's GNN report.

Issues

As in any large exercise, issues arise that may exist in future games and actual operations. Player coordination is important to developing wargames. Blue teams must be able to discuss and resolve planning issues during the academic year. In the current year as in the past, the primary means of coordination was via secure telephone and video teleconferencing (VTC) facilities. Also, differences in VTC audio-visual equipment among colleges and equipment down time continued to impact on student coordination. Each college is on the defense simulation internet (DSI), but this system is cumbersome for the multi-point mode and has reliability problems. Three colleges have the defense commercial telecommunications network (DCTN) which appears more dependable than DSI. A single reliable, secure VTC system is essential to distributed coordination and gaming.

Also, differences in college travel and conflicts in scheduling VTC persist. Again this year students were unable to resolve some issues until they met face-to-face at Maxwell. To help them remain focused, colleges should select standardized hardware and software to create a joint senior level VTC network. This system could also help faculties coordinate curricula issues, provide for distance learning (faculty and guest lecturers addressing other institutions), allow for gaming other than JLASS, and eventually permit students to participate in JLASS from their home stations.

**video teleconferencing
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Controllers utilized a computer model to help adjudicate SOF and IW/C²W missions for the first time in 1996. Previously SOF adjudication caused concern among controllers and students. Resource specialists were well versed on special operations doctrine but unfamiliar with the modus operandi of opposing force unconventional warfare capabilities. Consequently, achieving adequate SOF results, and then applying them to the game, was a problem. Difficulties arose due to the lack of computer programs that could quickly show the effects of near-term SOF missions on the long-term conflict. For example, an attack on a satellite downlink station might have no effect at all on the current battle. However, if sufficient backup downlink stations are available, the normal flow of information may be disrupted while switching takes place. It could affect future fighting if the air tasking order was in the process of being sent when the system was destroyed and the backup stations were under assault. In a very short time, the computer model partly resolved this problem by assessing successes and failures of SOF missions. This is a step in the right direction because SOF operations will get increased emphasis as JCLASS matures.

If adjudicating SOF is hard, information warfare and C²W is more so. The exercise held in 1996 was the first in which an honest attempt was made to introduce IW/C²W into a JCLASS game. Work in this area is still in a nascent stage. There are no educational models available to adjudicate IW/C²W actions. Moreover, it is tough to subjectively assess the effects of a successful IW attack on the game. Providing results to students for planning purposes was a challenge. It was also especially difficult for red controllers since the National War College team included students from the School of Information Warfare Strategy. Given potential capabilities of opposing forces in the year 2004, students developed comprehensive plans to disrupt or delay blue force deployment into theater. In addition, they planned to drive wedges between blue coalition partners, interfere with financial networks in blue home areas, disrupt air traffic control systems from their homeland to northeast Asia, and destroy quality of life systems within their territories (for example, power grids and water supplies). As there is still no consensus on the effects of this type of warfare, there was no agreement among controllers on the success or effect of an IW campaign. Absent an IW/C²W specific model, red controllers used the SOF model which provided adequate material to generate feedback to students.

Logistics becomes an enabler and disabler for operations in a two-MRC scenario. Red and blue teams experienced constraints because of industrial base shortcomings. Logistics handbooks developed by the Industrial College of the Armed Forces contributed to the exercise by delineating available resources. Logistics issues led to operational debates on both sides. Students learned to operate in a resource constrained environment which, although the constraints may not have been as debilitating as necessary, made the transportation cell an integral partner with unified command cells and a “must” player.

JCLASS remains the premier joint educational exercise. Its structure and format offer ample leverage for senior colleges to meet their learning objectives. Faculty and staff learn to trust and cooperate with one another from the initial steering group meeting to the final after action review. Students internalize the spirit of cooperation as an essential aspect of joint and combined warfare. This provides future leaders an educational experience in strategic and operational art not available elsewhere. Preparation for and involvement in the exercise allow players to explore issues beyond the scope of unified command planning staffs. The exchange of ideas derived from various service perspectives and college curricula enlivens the unique potential of JCLASS. **JFQ**